

COPY FOR IB

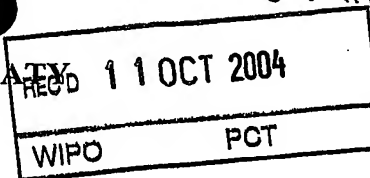
PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd PCT 13 OCT 2005



Applicant's or agent's file reference PAKIST03140		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. <b>PCT/KR2003/001442</b>	International filing date (day/month/year) <b>21 JULY 2003 (21.07.2003)</b>	Priority date (day/month/year) 20 JULY 2002 (20.07.2002)
International Patent Classification (IPC) or national classification and IPC  <b>IPC7 A61K 31/337</b>		
Applicant  <b>KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY et al</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>19 FEBRUARY 2004 (19.02.2004)</b>	Date of completion of this report  21 SEPTEMBER 2004 (21.09.2004)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  LEE, Mi Jeong  Telephone No. 82-42-481-5601 

BEST AVAILABLE COPY

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001442

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement) under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheet \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION

International application No.

PCT/KR2003/001442

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1 - 42	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 42	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 42	YES
	Claims		NO

### 2. Citations and explanations (Rule 70.7)

The following documents are considered for the purpose of this report:

D1: Proc. Natl. Acad. Sci. USA Vol.94, pp.2031-2035 (1997)

D2: WO 01/01960 A1 (11 January 2001)

D3: WO 01/68139 A1 (20 September 2001)

D4: WO 02/13815 A1 (21 February 2002)

#### 1. Novelty

The present invention relates to a paclitaxel composition and the preparation methods thereof for the treatment of bladder cancer wherein said paclitaxel composition comprises 4-90% by weight of monoglycerides, 0.01-90% by weight of oil, 0.01-90% by weight of emulsifiers and 0.01-20% by weight of paclitaxel.

D1 discloses a paclitaxel solution containing a strong surfactant(Cremophor EL) and dehydrated ethanol.

D2 discloses a pharmaceutical composition comprising a therapeutic agent such as paclitaxel, a triglyceride and a carrier, where the carrier is formed from a combination of at least two surfactants, at least one of which is hydrophilic. Several kinds of monoglyceride are exemplified as surfactants in Table 10 of D2.

D3 discloses a pharmaceutical composition containing a water-insoluble agent such as paclitaxel, monoglycerides, emulsifiers and organic solvents.

D4 discloses a pharmaceutical composition containing a drug which by itself is not readily absorbed in the digestive tract e.g. paclitaxel and a verapamil derivative as an absorption enhancer.

None of D1-D4 discloses a paclitaxel solution for the treatment of bladder cancer comprising monoglycerides, oil, and emulsifiers.

Therefore, claims 1-42 of the present invention are considered to be novel over D1-D4 [Article 33(2) PCT].

#### 2. Inventive Step

D2 seems to be the closest prior art to the present invention.

(Continued on Supplemental Box.)

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/001442

## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of:

Box V.

The surfactants in D2 happen to be monoglycerides, but monoglycerid is not an essential element of the composition in D2. In addition, there is no implication in D2 that the combination of paclitaxel, monoglycerides, surfactants, and oil can treat bladder cancer effectively by penetrating into the muscle layer of the bladder. Therefore, the inventive step of claims 1-42 of the present invention can be acknowledged [Article 33(3) PCT].

### 3. Industrial Applicability

The subject-matter of claims 1-42 appears to be industrially applicable [Article 33(4) PCT].